What is claimed is

1. A light source apparatus for an endoscope comprising:

a main light source;

a light guide member whose incident end face is opposed to the main light source and which guides light incident thereon to an emission end face thereof;

an auxiliary light source which is activated to emit light when no light is emitted from the main light source and which is supported to move between a stand-by position in which the auxiliary light source is located out of a main light path between the main light source and the incident end face and an operative position in which the auxiliary light source is located in the main light path and is opposed to the incident end face when the main light source is inoperative; and

an auxiliary light source emission control means for driving the auxiliary light source at a continuous emission mode to emit light of a predetermined intensity or at an intermittent emission mode to emit light of an intensity higher than the predetermined intensity.

2. A light source apparatus for an endoscope according to claim 1, wherein the light source apparatus is used with an endoscope processor to which an electronic endoscope or a fiber scope can be mounted, and wherein said

auxiliary light source emission control means drives the auxiliary light source to emit light intermittently in synchronization with an image pickup operation of an image pickup means of the electronic endoscope when the electronic endoscope is connected to the endoscope processor and drives the auxiliary light source to emit light continuously when the fiber scope is connected to the endoscope processor.

3. A light source apparatus for an endoscope according to claim 2, wherein said auxiliary light source emission control means drives the auxiliary light source to emit light intermittently in synchronization with a vertical synchronizing signal to drive the image pickup means.

4. A light source apparatus for an endoscope according to claim 1, wherein the auxiliary light source is made of an LED, and said auxiliary light source emission control means drives the LED at a constant current smaller than an absolute maximum rated value of a forward current of the LED when the continuous emission is carried out, and drives the LED at a pulse current of which a crest value is higher than the absolute maximum rated value of the forward current when the intermittent emission is carried out.

5. A light source apparatus for an endoscope according to claim 1, further comprising a selection switch

means for selecting the intermittent emission of the auxiliary light source at a pulse current or the continuous emission thereof through the auxiliary light source emission control means.

6. A light source apparatus for an endoscope according to claim 1, further comprising a sensor means for detecting whether the light guide member is mounted or the electronic endoscope is mounted, wherein said auxiliary light source emission control means drives the auxiliary light source at a pulse current when it is detected by the sensor means that an electronic endoscope having the light guide member is mounted.